

Name: _____

Date: _____

Period: _____

Geometry CRT Review Version 1

1. Given: $RS \cong ST$. Which conjecture is not true

- a. $ST = ST$
- b. \overline{RS} and \overline{ST} are the same length
- c. $RS = ST$
- d. R, S, and T are collinear

2. **Statement 1: If Joy doesn't watch TV, then she reads.**

Statement 2: If Joy reads, then she uses her imagination.

Which of the following is a valid conclusion based on the statements above?

- a. If Joy doesn't watch TV, then she uses her imagination.
- b. If Joy reads, then she doesn't watch TV.
- c. If Joy doesn't use her imagination, then she doesn't watch TV.
- d. If Joy uses her imagination, then she doesn't watch TV.

3. **If it is a square, then it is a rectangle.** Which of the following is true about this statement and its inverse?

- a. It is a true statement with a true inverse.
- b. It is a false statement with a false inverse.
- c. It is a true statement with a false inverse.
- d. It is a false statement with a true inverse.

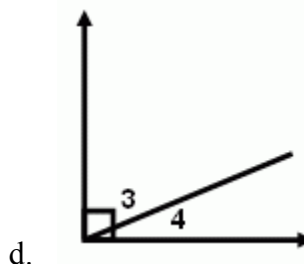
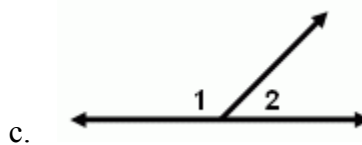
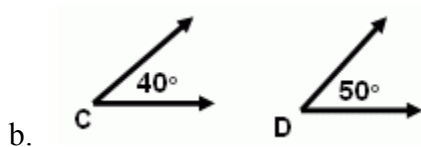
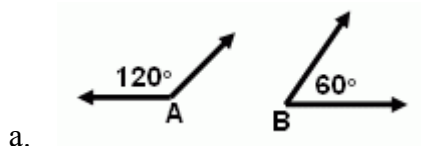
4. Given the statement, "If an angle measures 30 degrees, then it is acute," identify the converse, then determine if it is true or false.

- a. "If an angle is acute, then it measures 30 degrees; 73" True
- b. "If an angle is acute, then it measures 30 degrees; 73" False
- c. "If an angle is acute, then it does not measure 30 degrees; 73" True
- d. "If an angle is acute, then it does not measure 30 degrees; 73" False

5. **While hiking, Tom and Janice saw a yellow flower. "If the flower is a sego lily," Janice declared, "then it is the state flower of Utah." Tom thought that the converse of Janice's statement was also true.** Which statement is the converse?

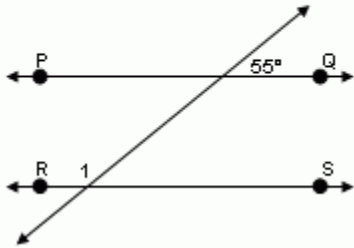
- a. If the flower is not a sego lily, then it is not the state flower of Utah.
- b. If the flower is not the state flower of Utah, then it is not a sego lily.
- c. If the flower is a sego lily, then it is not the state flower of Utah.
- d. If the flower is the state flower of Utah, then it is a sego lily.

6. Which of the following is a counterexample of the statement: "If two angles are supplementary, then they are a linear pair?"



7.

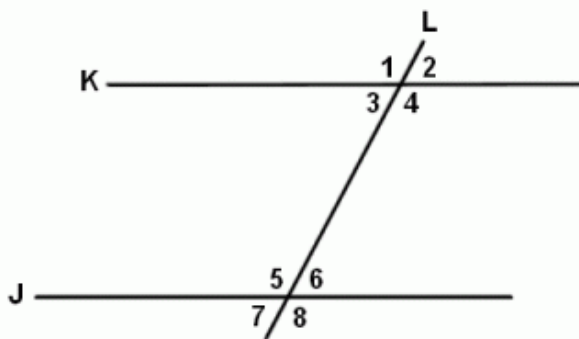
Given: $\overline{PQ} \parallel \overline{RS}$. What is $m\angle 1$?



- a. 55° b. 35° c. 125° d. 115°

8.

Given: $\angle 1$ and $\angle 6$ are supplementary
Prove: $K \parallel J$

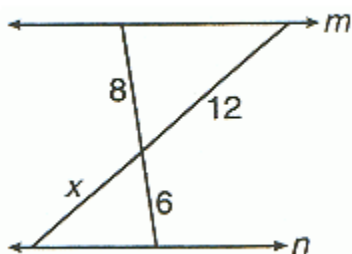


What could be the first and second statements of the proof?

- a. $\angle 1$ and $\angle 6$ are supplementary, $\angle 1 \cong \angle 4$
b. $\angle 1$ and $\angle 6$, $K \parallel J$
c. $\angle 1$ and $\angle 6$, $L \parallel J$
d. $\angle 1$ and $\angle 6$ are supplementary, $\angle 2 \cong \angle 5$

9.

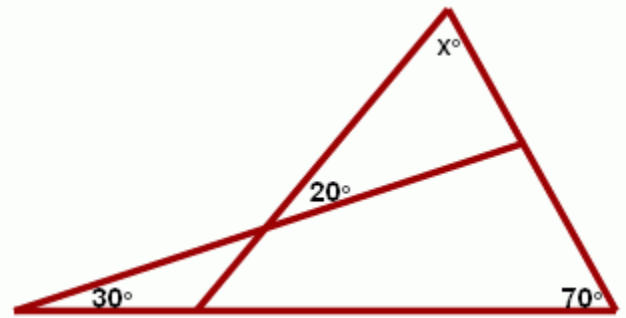
Given: $m \parallel n$



What is the value of x ?

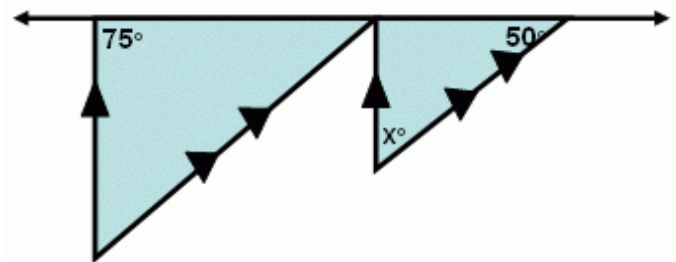
- a. 6 b. 8 c. 9 d. 10

10. Given the following figure, what is the value of x ?



- a. 70 b. 60 c. 50 d. 40

11. Given the following triangle, what is the value of x ?



- a. 75 b. 65 c. 55 d. 50

12. A rectangle has a diagonal 12 inches long and a width of 4 inches. What is the length of the rectangle?

- a. $8\sqrt{2}$ inches b. $4\sqrt{10}$ inches
b. $6\sqrt{3}$ inches c. $10\sqrt{2}$ inches

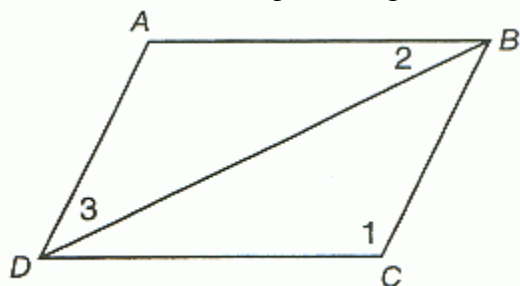
13. An altitude of an equilateral triangle is 10 centimeters long. What is the perimeter of the triangle?

- a. 103.9 centimeters b. 60.0 centimeters
c. 52.0 centimeters d. 34.6 centimeters

14. Which of the following statements is **not** true?

- a. The diagonals of a rhombus are perpendicular.
b. The diagonals of a parallelogram bisect the opposite angles.
c. Rectangles have four congruent angles.
d. Consecutive angles of a parallelogram are supplementary.

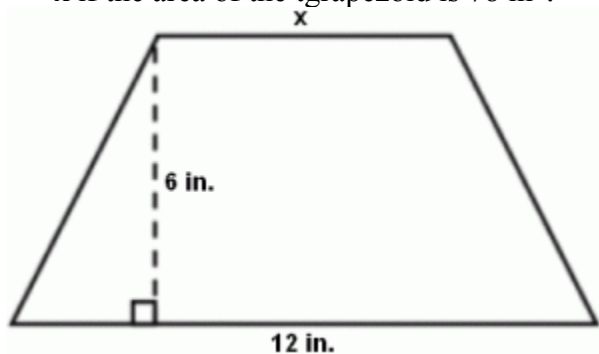
15. Given ABCD is a parallelogram.



If $m\angle 1 = 110^\circ$ and $m\angle 2 = 30^\circ$, then what is the $m\angle 3$?

- a. 45° b. 40° c. 35° d. 30°

16. Given the trapezoid below, what is the length of x if the area of the trapezoid is 78 in^2 ?

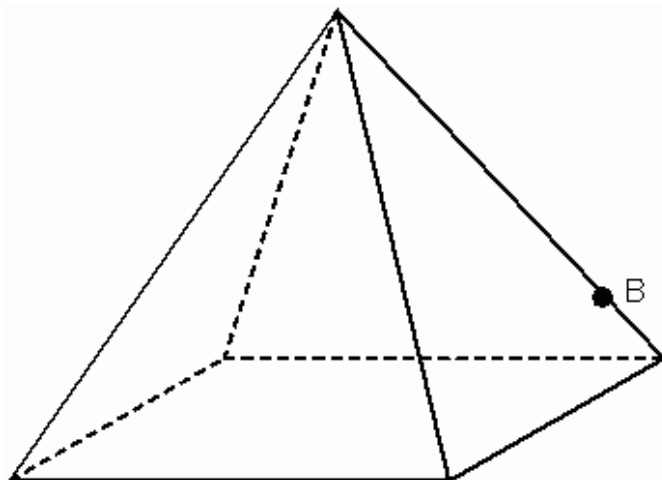






- a. 6 in. b. 14 in c. 13 in. d. 1 in.

17. What is the classification of a polyhedron with 8 faces, 6 vertices, and 12 edges?

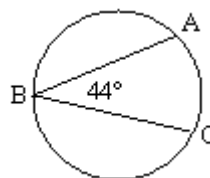
- a. Tetrahedron b. Octahedron
c. Hexadron d. Dodecahedron

18. Given the square pyramid pictured here, if you slice the pyramid horizontally through point B, which of the following is the shape of the cross section?



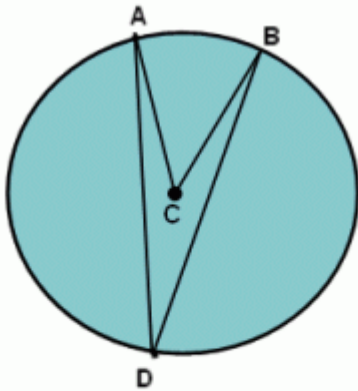
- a.  b. 
c.  d. 

19. What is the measure of arc AC?



- a. 88°
b. 66°
c. 44°
d. 22°

20.

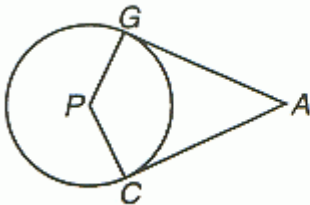


In $\odot C$, $m\angle ACB = x$. What is the $m\angle ADB$?

- a. $(\frac{1}{4}x)^\circ$ b. $(2x)^\circ$
 c. $(\frac{1}{2}x)^\circ$ d. $(x)^\circ$

21.

\overline{AC} and \overline{AG} are tangent to circle P.



If $m\angle CAG = 50^\circ$, what is the measure of $\angle CPG$?

- a. 130° b. 115° c. 100° d. 65°

22. What is the equation of a line that contains the point $(-1,2)$ and is parallel to the line

$$y = -\frac{1}{2}x + 5$$

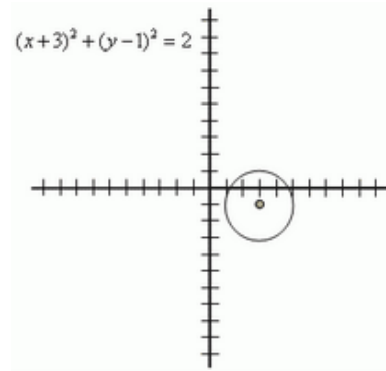
- a. $y = -\frac{1}{2}x + 2$ b. $y = -\frac{1}{2}x + \frac{3}{2}$
 c. $y = 2x + 2$ d. $y = 2x + \frac{3}{2}$

23. Find the distance between the points $(0,2)$ and $(3,4)$ and **leave in radical form**.

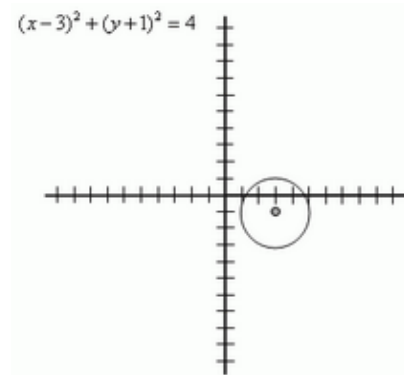
- a. $\sqrt{6}$ b. $\sqrt{13}$ c. $\sqrt{26}$ d. $\sqrt{47}$

24. Given the radius of a circle is 2 and the center is at $(3,-1)$, what is the correct equation and correct graph?

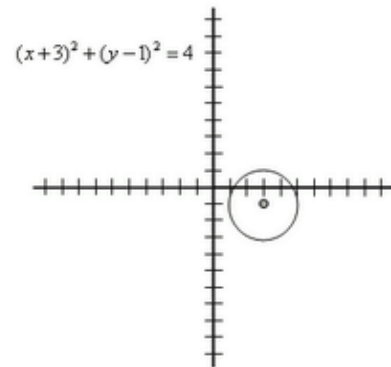
a.



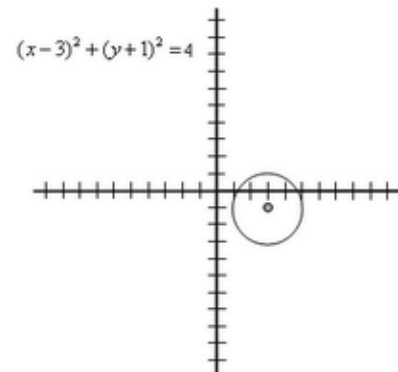
b.



c.



d.

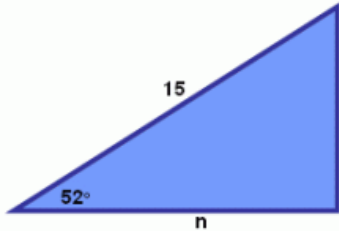


25. The equation of a circle is:
 $(x - 4)^2 + (y + 3)^2 = 36$.

Where is the location of the center of the circle?

- a. (4, -3) b. (-4, 3) c. (-4, -3) d. (4, 3)

26. Given the following triangle,



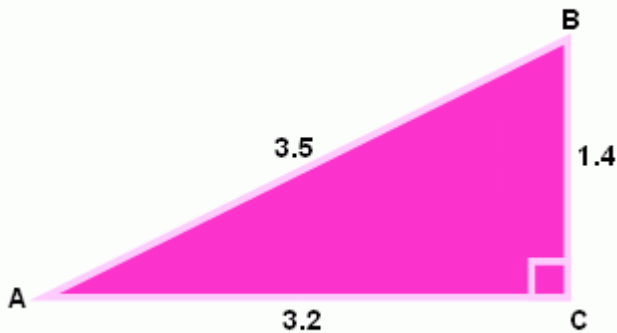
which of the following equations should be used to find the value of n ?

a. $\tan 52^\circ = \frac{15}{n}$ b. $\cos 52^\circ = \frac{15}{n}$

c. $\sin 52^\circ = \frac{n}{15}$ d. $\cos 52^\circ = \frac{n}{15}$

- 27.

Given $\triangle ABC$,



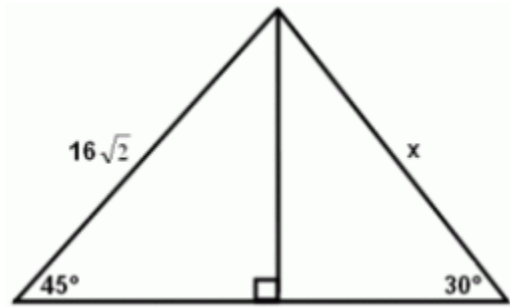
what is $\cos A$?

- a. 2.29 b. .91 c. .44 d. .40

28. If Sue is given that $\tan A = .2566$, then what is the measure of angle A?

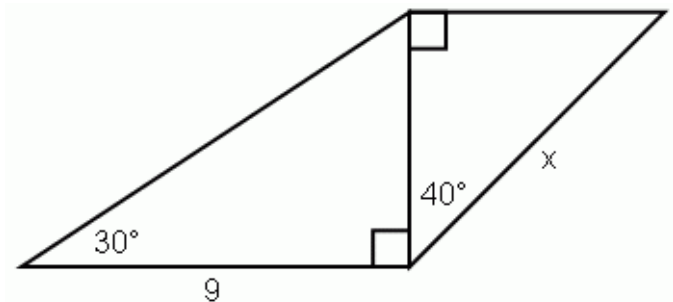
- a. 1° b. 4° c. 9° d. 14°

29. Given the following triangle, **what is the value of x ?**



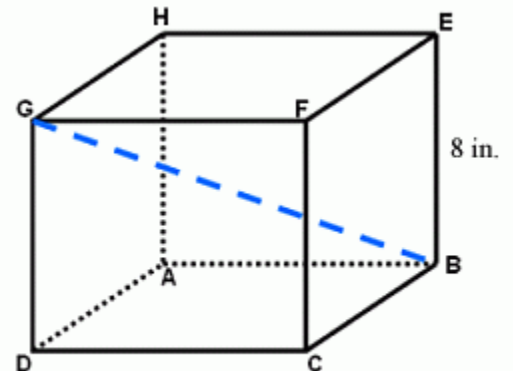
- a. $16\sqrt{3}$ b. $16\sqrt{2}$ c. 32 d. $32\sqrt{2}$

30. Given the following quadrilateral, **what is the value of x ?**



- a. 6.2 b. 6.8 c. 8.1 d. 8.3

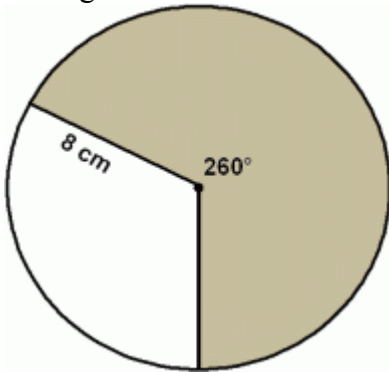
31. Given the cube below,



what is the length of the diagonal \overline{GB} ?

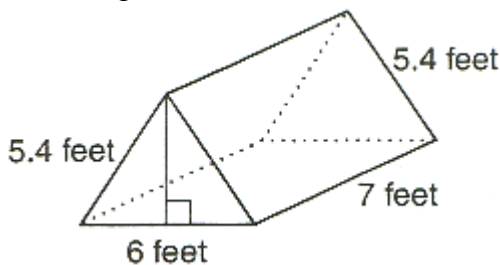
- a. $6\sqrt{3}$ in b. $8\sqrt{5}$ in c. $8\sqrt{3}$ in d. $16\sqrt{2}$ in

32. What is the approximate length of the arc of the shaded region?



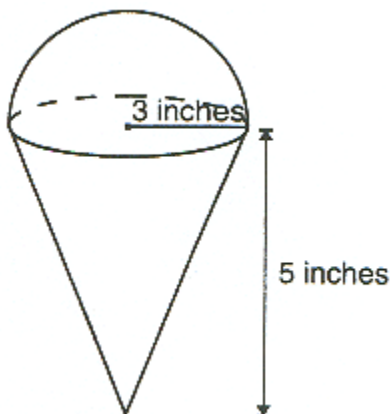
- a. 42.8 cm
b. 36.3 cm.
c. 24.6 cm
d. 18.2 cm

33. Alex wants to waterproof every section of his tent, including the floor. The process costs \$0.16 per square foot. How much will it cost to waterproof the tent?



- a. \$12.10 b. \$15.26 c. \$18.82 d. \$23.14

34. The slush in a snow cone fills a cone and forms a hemisphere on top. What is the approximate volume of the slush in the snow cone?

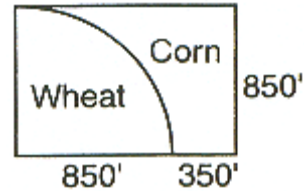


- a. 42 in^3 b. 61 in^3 c. 75 in^3 d. 104 in^3

35. What is the lateral surface area of a right square pyramid with a height of $3\sqrt{3} \text{ cm}^2$ and a base of 6 cm?

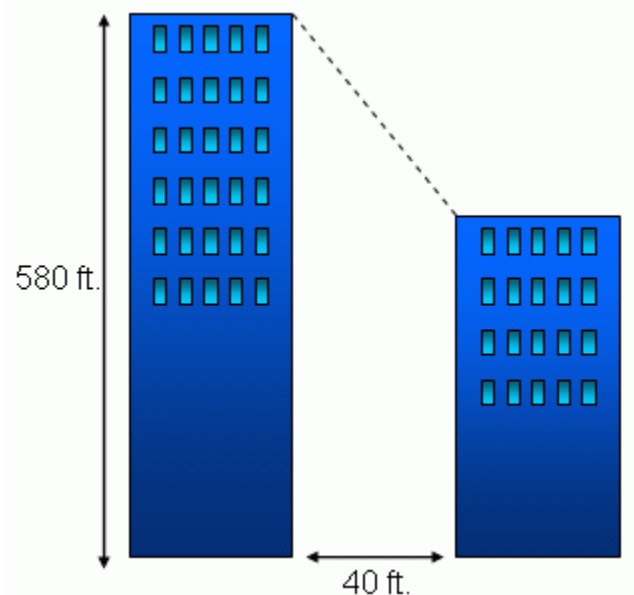
- a. $36\sqrt{3} \text{ cm}^2$ b. 72 cm^2 c. $48\sqrt{3} \text{ cm}^2$ d. 108 cm^2

36. An insect lands in Michael's field. Assuming that the insect has no preference for one crop or the other, what is the probability that it lands in the wheat?



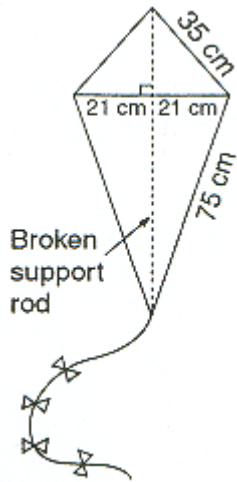
- a. 56% b. 59% c. 63% d. 66%

37. Two buildings are on opposite sides of a street 40 ft. wide. The taller of the two buildings is 580 Ft. Tall. The angle of depression from the top of the tallest building to the shorter building across the street is 57 degrees. Find the height of the shorter building.



- a. 488 ft.
b. 518 ft.
c. 546 ft.
d. 558 ft.

38. The support rod that runs from the top of the kite to the bottom of the kite has been broken and needs to be replaced. What length of rod is needed to replace the broken piece?



- a. 28 cm b. 72 cm c. 100 cm d. 110 cm

39. The Oroville Dam in Feather, California is the highest dam in the United States. From a point 300 ft. on the river from the base of the dam, the angle of elevation to the top of the dam is 68.33 degrees. What is the height of the dam?



- a. 812 ft. b. 755 ft. c. 279 ft. d. 119 ft.

Geometry CRT Review Version 1 Key

1. d
2. a
3. c
4. b
5. d
6. a
7. c
8. a
9. c
10. b
11. c
12. a
13. d
14. b
15. b
16. b
17. b
18. a
19. a
20. c
21. a
22. b
23. b
24. b
25. a
26. d
27. b
28. d
29. c
30. b
31. c
32. b
33. d
34. d
35. b
36. a
37. b
38. c
39. b